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**CLAIMS**

We claim:

- 3       1. A non-woven fiber assembly comprising one or more fibers wherein the fibers  
4       contain:  
5             an adhesive component;  
6             an elastomeric component; and  
7             a hydrophilic component.
  
- 1       2. The non-woven fiber assembly of claim 1, wherein the assembly is capable of  
2       adhering to a dry substrate and is not capable of adhering to a wet substrate.
  
- 1       3. The non-woven fiber assembly of claim 1, wherein the assembly forms a  
2       component of a medical dressing.
  
- 1       4. The non-woven fiber assembly of claim 1, wherein the adhesive component is  
2       selected from the group consisting of homo- and co-polymers of acrylates,  
3       silicones, polyvinylpyrrolidones and mixtures thereof.
  
- 1       5. The non-woven fiber assembly of claim 1, wherein the elastomeric component  
2       is selected from the group consisting of polyurethanes, polyesters,  
3       polyanhydrides, polyamides, polyimides and mixtures and co-polymers  
4       thereof.
  
- 1       6. The non-woven fiber assembly of claim 1, wherein the hydrophilic component  
2       is selected from the group consisting of linear poly(ethylenimine), grafted  
3       cellulosics, poly(ethyleneoxide), poly vinylpyrrolidone, polypropylene-  
4       oxides, polyurethanes, poly(hydroxyethylmethacrylate), and mixtures and  
5       co-polymers thereof.
  
- 1       7. The non-woven fiber assembly of claim 1, wherein the composition of the one  
2       or more fibers at a first surface of the assembly is different from the  
3       composition of the one or more fibers at a second surface of the assembly.

1       8. The non-woven fiber assembly of claim 1, wherein the at least one fiber has a  
2             diameter of between about 3 nanometers and about 3000 nanometers.

1       9. A method of making a non-woven fiber assembly, the method comprising the  
2             steps of:  
3             providing at least one fiber-forming material;  
4             forming at least one fiber from said at least one fiber-forming material;  
5             and wherein the at least one fiber forming material comprises an adhesive  
6             component, an elastomeric component, and a hydrophilic component.

1       10. The method of making a non-woven fiber assembly according to claim 9,  
2             wherein said one or more fiber-forming materials is provided in a solvent,  
3             and wherein said solvent is selected from the group consisting of alcohols,  
4             ethyl acetate, acetone, and tetrahydrofuran.

1       11. The method of making a non-woven fiber assembly according to claim 9,  
2             wherein the relative amounts of said adhesive component, said  
3             elastomeric component, and said hydrophilic component varies over time,  
4             thereby producing a fiber assembly in which the composition of the one or  
5             more fibers at a first surface of the dressing differs from the composition  
6             of the one or more fibers at a second surface of the dressing.

1       12. A method of treating a patient comprising:  
2             applying a non-woven fiber assembly to a predetermined area of the  
3             patient, wherein the non-woven fiber assembly contains one or more  
4             fibers comprising an adhesive component, an elastomeric component, and  
5             a hydrophilic component.  
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1       13. An apparatus for forming at least one composite fiber, the fiber comprising a  
2             hydrophilic component, an elastomeric component and an adhesive

3           component, wherein the apparatus comprises:

4           a plurality of reservoirs for containing more than one type of fiber-forming  
5           material;

6           a plurality of valves, each independently in communication with a reservoir;  
7           and

8           a fiber-forming device selected from the group consisting of a spinnerette, a  
9           NGJ nozzle, and an electrospinning device, in communication with said valves.

1       14. The apparatus according to claim 13, additionally comprising a mixing  
2       chamber in communication with said valves and said fiber-forming device.

1       15. The apparatus according to claim 13, wherein the fiber-forming device is an  
2       electrospinning device, and additionally comprising a power source in  
3       electrical communication with said electrospinning device.